

The Examiner believes that the claims are generally narrative and indefinite and appear to be a literal translation into English from a foreign document and have grammatical and idiomatic errors.

In response to the Examiner's concerns regarding the claims in view of 35 U.S.C. §112, second paragraph, Applicant has amended the appropriate claims to make them more definite. Reconsideration is respectfully requested. To the extent that such amendments are not sufficient to overcome the rejections under 35 U.S.C. §112, second paragraph, Applicant respectfully requests that the Examiner formally point to any perceived deficiencies.

REJECTION UNDER 35 U.S.C. § 102

Claims 1-4 and 9-11 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Karmaschek (U.S. Patent No. 5,584,946).

In this regard, the Examiner believes that Karmaschek discloses an aluminum part with a titanium coating intended to be welded to another part particularly in automobile manufacture. The Examiner goes on to note that the titanium is provided in a chromium free acidic solution and applied to the aluminum part by contacting the solution for a sufficient amount of time. The Examiner concludes that with the coating applied, the contact resistance would inherently be lowered.

As the Examiner is no doubt aware, a rejection under 35 U.S.C. §102(b) can only be maintained if a single reference teaches each and every element of the claims. If there are any differences whatsoever between the reference and the claim(s), the rejection

cannot be based on 35 U.S.C. §102. Titanium Metals Corp. v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985). This rejection is respectfully traversed.

In response to the Examiner's rejection of Claims 1-4 and 9-11 under 35 U.S.C. §102(b), Applicant has amended Claims 1 and 9 to specifically reflect that material utilized to coat the part is non-phosphating acidic solution including titanium fluoride acid as opposed to a phosphating solution containing 1.0% titanium phosphate in deionized water as disclosed at col. 7, lines 45-col. 8, line 10 of Karmaschek. As it is now clear that Karmaschek does not include each and every element of the claims as amended, Applicant requests reconsideration of the rejection.

REJECTION UNDER 35 U.S.C. § 103

Claims 5-10 and 12-15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Karmaschek (U.S. Patent No. 5,584,946) in view of Dash (U.S. Patent No. 2,858,414).

In this regard, the Examiner states that Karmaschek does not specifically disclose the part to be welded being a weld stud. However, the Examiner notes that Dash discloses a stud for welding. The Examiner believes it would have been obvious to one skilled in the art to make the part disclosed in Karmaschek a stud as shown in Dash. Additionally, the Examiner believes the acidic solution being ALODINE® 2040 would have been obvious to use since it is a known commercially available acidic solution. This rejection is respectfully traversed.

Applicant respectfully disagrees with the rejection under 35 U.S.C. §103(a), and particularly disagrees with the Examiner's suggestion that the use of ALODINE® 2040 would have been obvious since it is a known commercially available acidic solution.

In order to maintain a rejection under 35 U.S.C. §103(a), the Examiner must establish that there is some suggestion, either in the reference or in the relevant art, of how to modify what is disclosed to arrive at the claimed invention. In addition, "[s]omething in the prior art as a whole must suggest the desirability, and, thus, the obviousness, of making the modification to the art suggested by the Examiner. *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1051, 5 U.S.P.Q.2d (BNA) 1434, 1438 (Fed. Cir.), *cert. denied*, 488 U.S. 825 (1988). That is, although the Examiner may suggest that the teachings of a primary reference could be modified to arrive at the claimed subject matter, the modification is not obvious unless the prior art also suggests the *desirability* of such modification. *In re Laskowski*, 871 F.2d 115, 117, 10 U.S.P.Q.2d (BNA) 1397, 1398 (Fed. Cir. 1989).

Applicant respectfully submits that Karmascheck specifically relates to a chromium free conversion coating which is accomplished through the use of a phosphating step in a multi-step conversion process. Since the art failed to recognize that a single, non-phosphating solution conversion treatment was possible, the rejection under §103(a) should be considered moot.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt

and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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ATTACHMENT FOR SPECIFICATION AMENDMENTS

The following is a marked up version of each replacement paragraph and/or section of the specification in which underlines indicates insertions and brackets indicate deletions.

Initially, the weld-on part is pre-treated via known etching techniques to strip away aluminum oxides and thereby expose an aluminum or aluminum alloy surface. The titanium containing material is formed upon exposed aluminum or aluminum alloy portion of the weld-on part by immersing the part in [an] a non-phosphating acidic solution including a concentration of titanium ions and, preferably, a chromium free acidic solution containing titanium ions. By way of non-limiting example, one suitable acidic solution believed to contain a sufficient quantity of titanium ions, initially or through sequential addition during the application step, is known as ALODINE® 2040, which is a non-phosphating solution including titanium ions derived from titanium fluoride acid, preferably present in an amount of between about 5.0% to about 20.0% of the acidic solution. ALODINE® 2040 is a commercially available product from Henkel Surface Technologies (Madison Heights, Michigan). [The acidic solution utilized should provide a caustic passivation for the aluminum surface to be treated.]

ATTACHMENT FOR CLAIM AMENDMENTS

The following is a marked up version of each amended claim in which underlines indicates insertions and brackets indicate deletions.

1. (Amended) A part attachable to a substrate via a welding process, comprised of aluminum or an aluminum alloy, wherein a surface of the part to be welded to the substrate is, [provided with] after optionally cleansing with an etchant, treated with a non-phosphating acidic solution containing titanium fluoride acid, said acidic solution serving to both activate and passivate the part, thereby providing a titanium containing material on the part which is capable of lowering the contact resistance between the part and the substrate during a welding process.

Please cancel Claims 2-3.

9. (Amended) A method of producing a weldable aluminum part having titanium dispersed along a surface thereof, said method comprising the steps of:

providing [an] a combined activating and passivating acidic solution containing [titanium ions] at least about 5.0% titanium fluoride acid; and

contacting the weldable aluminum part with the acidic solution for a sufficient period of time to permit the application of titanium along a surface of the part.

Please cancel Claim 10.



Surface Technologies

Gebrauchsanleitung

Alodine® 2040

Chromfreie Beizpassivierung für Aluminium

Eigenschaften und Anwendungsgebiete:

Chromfreie Beizpassivierung für Aluminium zur Stabilisierung des Oberflächenwiderstandes.

Alodine® 2040 kann im Tauch- und Spritzverfahren angewendet werden.

Prozesskomponenten:

Alodine® 2040
Alodine® 2040 E-1
VE-Wasser

Anwendungsweise:

Ansatzmenge für 1.000 l Alodine® 2040-Badlösung:

Den halb mit VE-Wasser gefüllten Behälter werden unter Rühren zugegeben:

Alodine® 2040	10 - 30 l bzw. 13,6 - 40,8 kg
vorzugsweise	15 l bzw. 20,4 kg

Anschließend wird mit VE-Wasser auf 1000 l Badinhalt aufgefüllt.

Zusammenfassung der Betriebsdaten:

Änderungen der nachfolgend angeführten Betriebsdaten können sich als notwendig erweisen und müssen anlagenspezifisch ermittelt werden.

Betriebsdaten:

Temperatur	45 °C
Behandlungszeit	30 - 90 s
Punktzahl "Freie Säure"	12,2 - 38,6
Reaktionsrate (R.P.)	≥ 5 Punkte

Sicherheitsdatenblatt gemäß 91/155/EWG - ISO 11014-1

Einstufung und Kennzeichnung:

Alodine 2040

1. Produkt- und Firmenbezeichnung

Bezeichnung des Produktes:
Alodine 2040

Firmenbezeichnung:

HENKEL KGaA, D-40191 Düsseldorf Tel.: Germany
(0)211/797-0

Für Notfälle steht der Henkel-Ankunftsdiens unter der
Telefon-Nr.: ++49-(0)211/797-0 Tag und Nacht zur Verfügung.

2. Zusammensetzung / Angaben zu den Bestandteilen

Wässrige Lösung anorganischer Säuren

Inhaltsstoffangaben:

5-20 % Titanfluorwasserstoffsäure

Symbol: T

R-Satz: 23/24/25-34

30-50 % Schwefelsäure

Symbol: C

R-Satz: 35

3. Mögliche Gefahren des Produktes

R 20/21/22: Gesundheitsschädlich beim Einatmen, Verschlucken und
Berührung mit der Haut

R 35: Verursacht schwere Verätzungen

4. Erste-Hilfe-Maßnahmen

nach Einatmen:

Frische Luft

Beim Einatmen von Sprühnebeln Arzt aufsuchen.

nach Hautkontakt:

Spülung mit fließendem Wasser und Seife. Hautpflege.

Beschmutzte, getränkte Kleidung wechseln.

nach Augenkontakt:

Sofortige Spülung unter fließendem Wasser (10 Minuten lang).

Verband mit steriler Gaze anlegen, Facharzt aufsuchen.

Alodine® 2040
Formulation